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ABSTRACT

Two conferences brought together educators in the state of New York with an interest in individualized instruction. The conferences report consists of five major papers. Individualized teaching practices are compared with those of non-individualized education. A list of the characteristics of an ideal individualized school is given. Seventeen assumptions basic to individualized instruction are presented. The state of individualized instruction in New York is reviewed. A description of individualized instruction in nongraded schools and a summary of the plans for the future in individualized education in New York are also included. An appendix contains the background information about the conference itself: the program, a directory of conference leaders, brief summaries of group discussions, and a list of conference participants. (JY)

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# REGIONAL CENTER

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# INDIVIDUALIZED INSTRUCTION

EM 009 357



A report from
conferences
conducted by
the office of
Regional Education
Planning for
Suffolk County

U.S. DEPARTMENT OF HEALTH,
EDUCATION,& WELFARE
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# INDIVIDUALIZED INSTRUCTION

## Abbreviated Proceedings of Two Conferences

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at

Gurney's Inn, Montauk, Long Island

from

February 8 to 9, 1971 and March 29 to 30, 1971

conducted by

Office of Regional Educational Planning for Suffolk County

3

Dr. John J. Keough, Director 201 Sunrise Hwy., Patchogue, N.Y.

office of

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AN INTRODUCTION

"Learning is personal, unique, unstandardized."
- Ronald C. Doll

"I look, too, for a more flexible system of education in this State with increased provision of opportunity for students to participate in any program at any level at which they are capable of performing, and of increased opportunity for students to proceed at their own pace. ...A good question is: If the abilities, incentives, and learning system of students vary widely, why are most of them taught in the same way over the same period of time?"

- Ewald B. Nyquist

"Traditionally, instruction has been oriented toward a group or class. Common assignments are given to all members of the group and if individual projects are assigned all students are expected to complete their projects on the same specified date. Thus, these student learning experiences are group oriented, teacher paced, and scheduled at a time convenient to the teacher and the school.

In contrast, individualized instruction is oriented toward the child. Appropriate learning experiences are assigned each student. In order to determine what is "appropriate" for each learner some type of diagnostic procedure is used. Once these learning experiences are identified, instruction is mainly self-directed, self-administered, and scheduled, within the school's broad time constraints, at a time convenient to the learner."

- Jack V. Edling

## SUMMARY OF THE CONFERENCES

Two conferences on Individualized Instruction (I.I.), jointly sponsored by the State Education Department and Suffolk County's Office of Regional Educational Planning, both played to packed houses. Over 400 educators attended them.

This high interest in I.I. owes much to Dr. Jack Edling from Oregon's State System of Higher Education. In the late 1960's, Edling trekked across America to visit 46 out of an original list of 600 schools, all of which had reported use of I.I. Edling's journey produced a report that included case studies of the 46 schools and important general conclusions on the nature of I.I., its objectives, its procedures, its effects, its problems.

At Palo Alto in February of 1970, Edling's report was disseminated. Personnel from State Education Departments across the country heard it, and this was the event that triggered New York into action. In Suffolk, educators came to find out what had been happening in the State since then.

They learned a New York State Individualized Instruction Council had been established. Dr. Ted Grenda, Director of General Education chairs it, with Roger Ming, Supervisor of Education for the Gifted, at his right hand. A college professor, a science teacher, an industrialist, a bureau chief, and an I.I. expert from the Regional Offices round out a compact but broad-based group whose purpose is to develop strategies to spread I.I. through the State.

Several strategies were found to be already underway. This State Council intends to blanket New York with a Network of local councils. Local councils will consist of actual practitioners of I.I. Through the Network, practitioners will share information with one another. As was made very clear at the Montauk Conference, sharing is most important in I.I. because its very nature produces and even demands multiple variations.

Besides benefiting the veterans of individualized instruction, the Network also plans to encourage new entries into it. This would be done by coordinating activities which will direct newcomers to places where ongoing programs could be seen and judged in actual practice.

Of course, the State Network idea depended on locating and describing I.I. practices actually in use. Dr. Donald Nasca from the State University at Brockport did this initial task. The next step was to ask the Regional Education Centers for help in disseminating the Nasca survey. To date, the Centers in Westchester, the Genessee Valley, Nassau, and Suffolk have been able to assist.

The Suffolk Center, directed by Dr. John Keough, used the Nasca Survey to begin its I.I. Conferences at Montauk. Then, in alternating large and small-group sessions that went on for two days, local educators learned at least these three points about I.I.:

First, the term "Individualized Instruction" means many things to many men. One school sees I.I. as a remedial tool for pushing "slow" learners up to group standards. Another uses I.I. only for "bright" students by giving them added enrichment opportunities after they finish the

prescribed program. A third feels it has achieved I.I. by acquiring a well-stocked media and material center, even though the materials of the center have not been actually fused with the school's ongoing programs.

Nasca grouped I.I. variations on a scale conceived by Edling. At one end, the teacher controls student objectives and activities; at the other, the student is free to set his own objectives and choose activities to get him there. New York State's Individual Instruction Council wants to move I.I. deeper into the sector of student freedom.

Second, participants learned practical essentials for starting an I.I. program and making it succeed. Administrative support is necessary. Parents must be involved and informed. A wide supply of self-teaching materials must be available so teachers will be free for frequent personal conferences with students. Newcomers to I.I. must study veteran practitioners. I.I. should be started in a small way with a handful of committed teachers. Curriculum areas should be chosen where those teachers are strong.

Kits already prepared by commercial companies also make a good beginning. The kits usually have four common components: objectives, diagnostic test, activities, evaluation. Experience with such structured kits soon leads to personal adaptations and creativity.

The best settings for I.I. have informality and large open spaces. Here, students can watch others learning and so learn themselves. Also, a constant flow of information between students and teachers is facilitated.

Newness of the building is irrelevant. Nasca stated that the ideal I.I. setting was recognizable by the following: it is difficult to find or identify the teacher; teachers are responsive to each individual; there is much movement which is free but purposeful; students are excited, happy, friendly; a variety of tasks are underway; students take the initiative in choosing from a variety of readily available school and non-school learning resources including materials, media, people.

Above all, the Suffolk conferees heard repeatedly that success with I.I. depends on altering attitudes and goals. Dr. Grenda said teachers must move from being "dispensers of information" to "humanizers in the classroom". Keynote speaker, Dr. William McLoughlin from St. John's University, said the teacher must no longer be regarded as the sole source of learning; emphasis should shift to <u>materials</u> in learning. Dr. McLoughlin warned that restrictive boxing of students into fixed grade levels can cause "emotional and psychological damage." Dr. Nasca made the provocative suggestion that good "instruction" may not necessarily be equated with good "learning". Instruction focuses on teachers; learning focuses on students, said Nasca. I.I. requires that <u>each</u> learner be treated as unique; to do this teachers must relinquish some of their controls over the learning process. Finally, student progress should no longer be considered in terms of grade-level norms, but in relation to each student's special potential, interests, talents.

Third, the Suffolk Regional Center's Conference did not minimize the difficulties of establishing I.I. There is teacher insecurity; time will have to be set aside for staff training. There is money; self-study materials must be procured and teacher aides may have to be hired. Further, there is evidence that some students find it difficult to adapt to I.I. Some parents will be disturbed over the new "freedom". And, it was noted that even procedures in such areas as record keeping, scheduling, and diagnosis were still very "unstable".

Nevertheless, weighted against difficulties was the vision of exponents who saw I.I. as a way toward higher student achievement through the enthusiasm and love for learning it could generate. Barry Kane said it could "unleash the maximum of our students' potential."

Dr. Grenda closed the Suffolk Conference with seven signs of the times: His Individualized Instruction Council is determined to establish a statewide I.I. Network. The State Education Department is ready to ease regulations. Universities are re-evaluating their present teacher-training programs. Interest in the British system of open classrooms is soaring. Commercial instructional materials are proliferating. Systems which continuously monitor achievement are being perfected. On the horizon technical advances promise computers that will provide superb delivery systems.

So, the fields seem ripe for an I.I. harvest.

## A COMPARISON OF PRACTICES

| Individualized Instruction | Non Individualized Instruction |
|---|---|
| **Student Behavior** | |
| **Objectives** | |
| The pupils pursue objectives which they have themselves have established. | The pupils pursue objectives which the teacher has established. |
| **Planning and Preparation** | |
| The pupil's planning and preparation have been unique in that they are engaged in independent work, study, practice, or demonstration. | The pupil's planning and preparatic have been by teacher's direction i that all pupils are engaged in the same activity. |
| **Communication-Direction** | |
| The pupils are engaged in small group activity in which discussion is considered a function of learning. | The pupil's participation in class is restricted to asking or answerir questions of the teacher. |
| **Communication-Message** | |
| The pupils are encouraged to manifest originality, creative productivity, and purposeful divergence. | The pupils are restricted to recitation of predigested material and to conformity. |
| **Function** | |
| The pupils are active participants in learning activities. | The pupils are passive recipients of knowledge. |
| **Evaluation** | |
| The pupil evaluates his own growth and development. | The pupil makes no self-evaluation but accepts teacher's opinion. |

Excerpt from "Danowski's Individualized Variables"

IAR - Research Bulletin, 1965
Institute of Administrative Research
Teachers College, Columbia University

## A COMPARISON OF PRACTICES

| Individualized Instruction | Non Individualized Instruction |
|---|---|
| **Teacher Behavior** | |
| Objectives | |
| The teacher pursues multiple objectives, each objectives related to a specific pupil or small group of pupils | The teacher pursues a single preselected objective applying it without variation to all pupils in the class. |
| Planning and Preparation | |
| The teacher's planning and preparation are in terms of individual students. | The teacher's planning and preparation are in terms of some single class norm. (This norm may be the average of the three or four "best" students.) |
| Communication-Direction | |
| The teacher communicates with individuals in the class while other individuals of the class remain engaged in different activities. | The teacher communicates with all pupils in the entire class at one and the same time (i.e., "out loud" even when addressing one youngster. |
| Communication-Message | |
| The teacher used feedback information from individual pupils as a basis for modifying the message being communicated. | The teacher's preselected communication is unmodified by circumstances other than his own objectives, or by variations in its reception by individual pupils. |
| Function | |
| The teacher's function is primarily observation of evidences of learning, or the lack of it, and the motivation and guiding of students to independent learning activity. | The teacher functions primarily as a purveyor of information. |
| Evaluation | |
| The teacher's evaluation of each pupil is based on the latter's growth and development. | The teacher evaluates the pupils en masse with a predetermined standard as the measure of success. |

NINE CHARACTERISTICS OBSERVABLE IN THE "IDEAL" INDIVIDUALIZED SCHOOL

1. Learners (all ages) working at different tasks.
2. Learners selecting learning material.
3. Learners selecting media.
4. Difficult to find and/or identify 'teacher'.
5. Learners are excited, happy and friendly.
6. Learners using non-school resources.
7. Learners using teachers, children, adults and wide variety of physical resources as learning referents.
8. Learners move freely with obvious purpose.
9. Adults are responsive to learner needs and desires.

- Dr. Donald Nasca

SEVENTEEN ASSUMPTIONS TO BE ACCEPTED

BEFORE SWITCHING TO INDIVIDUALIZED

INSTRUCTION

1. Teaching and learning are not synonomous. As teachers you may teach to your hearts content all day long and not effect a change in children. The most important thing that can happen in your school is learning.

2. Each student is capable of learning and wants to learn. (Maybe he doesn't learn what we want to teach him.) We as educators should provide materials and a good learning environment.

3. Boys and girls (children) are different (individuals). When we start treating all children the same we are rejecting the idea that each child is an individual. Individualization is not just putting all students through the same material at different rates.

4. Educators do not and cannot motivate children. The only worthwhile motivation is the child's inner drive.

5. Only a flexible, changing program can stay current. (You never will have <u>THE</u> PROGRAM.)

6. If you are going to change, you are going to be frustrated at times. Some of our best ideas follow a period of frustration.

7. If we really want to change what children are learning we must change what they are doing.

8. Success breeds success and failure breeds discontent, poor self-concept, learning blocks, and failure. (Bruner says the only justification for a teacher with knowledge in a classroom is that she minimize the chance of failure for the child.)

9. The role of the teacher is to structure environment not be the environment.

10. Not all teachers are equally competent in all areas. If we believe this then we must believe that teachers planning as a team will provide a better program for boys and girls. Tread slowly. If you believe in alternatives don't close the door for children. Collecting data, interpreting data, defining data should not be denied any child.

ASSUMPTIONS continued

11. We do want to develop autonomous learners. We do want to develop children with critical minds. How do we do this if children are not allowed to attack problems?

12. Each student is a social being. Many of us have not been helping children learn social roles. As educators we must help each child develop social characteristics.

13. An inductive divergent approach is best. (It is hard to do this if the class is teacher centered.) How can we talk about divergence if every child is put through the same steps?

14. The most important role of the teacher is to light a spark. He must be interested in things himself. You don't light fires with dead matches.

15. We are training children today for life in a future world and we have no idea what it will be like. The best preparation is a focus on real-life problems today.

16. Each teacher is eager to be considered professional but this also includes keeping current, being receptive, keeping an open mind, etc. The statement, "Some teachers are not cut out for this type of teaching" is not true. The same characteristics are applicable to a successful teacher.

17. Your change had better be dramatic. What you do the first day will set the pace. Slow but sure usually digs the ruts deeper.

- Edward J. Eaton

## Individualizing Instruction in New York State

by Dr. Donald Nasca

An individualized instruction inventory was distributed in August 1970 to schools in New York State through the sixteen Title III (ESEA) Regional Centers. Returns were analyzed and follow-up visits to a geographically distributed sample was carried on during October and November of 1970. Visits were brief and attempts were made to verify administrator descriptions through visits with both teachers and children.

### Introduction

Individualized education begins with an attitude that is manifested by a desire to treat learners as unique individuals. It is operationalized by providing a variety of learning experiences for learners and it is based on either a recognition that group instruction has limitations or a realization that process and affect are more critical needs for future roles than facts and skills.

Individualized education may be defined broadly within the context of a four-celled matrix developed by Jack Edling as a result of his recent national survey of individualized instruction. This framework (Fig. 1) is based on an assumption that control of direction and control of means for learning are the two components of learning most frequently taken into consideration. Either learner (student) or institutional (school) control of objectives and media may then be exercised to account for existing individualized instructional strategies.

Fig. 1

| | Control of Objectives | |
|---|---|---|
| Control of Media | School | Student |
| School | | |
| Student | | |

Both school control of objectives and media, in an individualized format, provides for a high degree of structure and appears to be an initial step in the individualization of education. Most aptly described as 'individualized instruction', this extrinsically controlled environment is represented by the Individually Prescribed Instruction (IPI) program developed

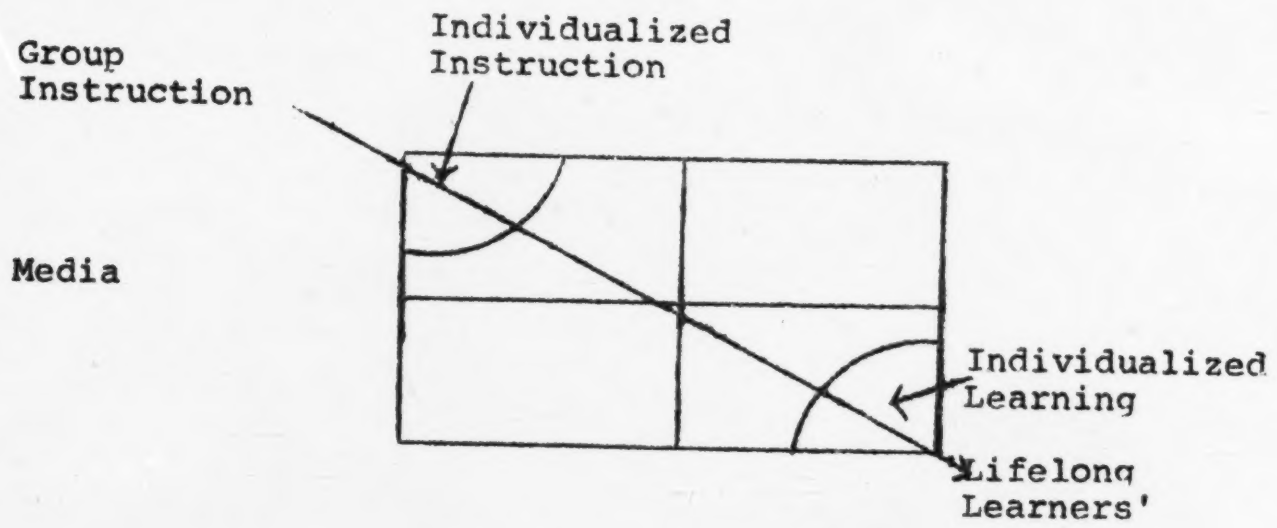
through Research for Better Schools (RBS) and now distributed by Appleton-Century-Crofts. IPI provides for the diagnosis of individual student capabilities and presents appropriate learning materials for each objective defined in the system.

At the other end of the 'individualized education' continuum is an intrinsically controlled environment where a student has control over both objectives and media. This individualized strategy might be classified as an 'individualized learning' environment and is best represented by the Village School in Great Neck where forty-eight 11th and 12th graders were drawn at random from a district wide pool of applicants. These students now participate in a totally open ended, learner oriented program. Students are excused from all standard curricular and attendance requirements in order to provide freedom needed for pursuit of individual objectives. A similar environment has been provided by the 'Alternate Junior High School' in Ithaca, N.Y.

Placing this polar continuum over the Edling matrix (Fig. 2) leads to the suggestion of a developmental sequence that precedes from a focus on instruction toward a focus on learning. This developmental sequence appears to be desirable and discrete stages along the continuum have been observed throughout the state. Particularly apparent have been those instances where a structured 'individualized instructional' strategy was initiated through purchase of a commercially available product and staff have attempted to modify the canned program and thereby illustrates movement along the continuum.

Fig. 2

Polar Continuum



Commercially available programs cover a broad range and include the single classroom type of 'laboratory' from Educational Progress Corporation (EPC) starting near $100 per lab to PLAN from Westinghouse in a $100 per student neighborhood for a complete service. Use of these programs with their carefully prepared 'instructional systems' components has in many instances had transfer affects. Teachers using the programs have begun developing their own individualized or independent environments in other academic areas soon after mastering use of the commercial product.

Commercially available programs have tended to be paper and pencil oriented while public school personnel have shown a tendency to build multi-media learning environments. Teacher made programs have tended to evolve around available and existing resources and generally include more media variety than canned programs. This tendency to adapt 'package programs' for existing situations, observed in several settings, would seem to indicate that the 'instructional system' inherent in most commercially available packages has valuable transfer effects.

## Development of Individualized Strategies

The process of developing individualized strategies appears to follow an identifiable path with operationally defined stages existing along the path. This path is compatable with the 'individualized instruction' -- 'individualized learning' continuum presented earlier. In fact, the two linear sets represent a single developmental trend.

Stages in the developmental sequence are presented below and summarized in Fig. 3.

## Individualized Instruction

1. Materials are varied in level in any one content area (i.e., different levels of reading material are available and generally all children progress through the same material but at different rates. Secondary schools use 'tracks' for different ability levels. Most remedial programs would fall in this category.)

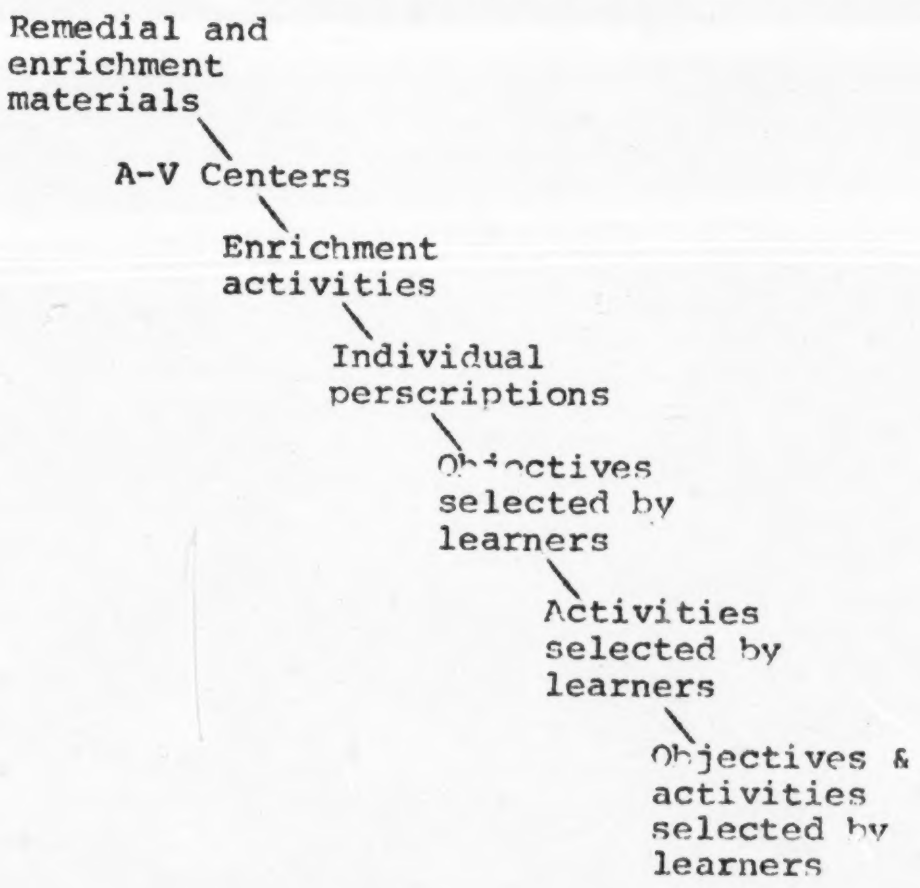
2. Available materials are varied in both level and approach in any one content area but do not form an integral part of the curricular structure. (I.e., multi-media counters provide a variety of resource materials designed to compliment traditional curricular structures.)

3. A variety of activities are available for voluntary involvement by students on an enrichment basis (i.e., classrooms contain activity areas for student participation after 'regular' work has been completed).

4. Students are assigned specific tasks based on diagnostic test results (i.e., 'individualized instruction' where individual student prescriptions are based on specific diagnostic tests. Because recent instructional systems are based on behaviors, most new systems require a diagnostic test package directly correlated with objectives in the system. Seldom can existing standardized tests be adapted for use in these instructional systems. Informal teacher evaluation via weekly or daily conferences are common at this level of individualizing education.)

Fig. 3

Development Sequence of Individualized Strategies




A re-evaluation of educational goals is apparently required to move beyond this point. The content oriented curriculum with mastery of predetermined skills has been revised to accommodate a wide variety of behaviors with broader implications. Processes replace products and means to an end frequently become the most significant components of learning environments.

Quasi Individualized Learning

5. Students may select from among a variety of objectives and will then engage in a predetermined set of experiences designed to accomplish those objectives (i.e., student

contracts, learning activity packets, contract activity packets, etc., frequently include several objectives and suggested strategies for achieving each objective. Each student may select or be advised to pursue one or more objectives via a route identified in the contract or packet.)

6. Students move freely among a variety of activities designed to promote specific skills and abilities (e.g., this activity centered approach still assumes a certain amount of extrinsic control over objectives and provides for learner freedom along the media dimension).

Individualized Learning

7. Students develop their own objectives and devise plans for achieving those objectives (e.g., this individualized learning level is a goal of individualized education and will most likely produce 'lifelong' learners required for future roles).

It will be noted that examples of individualized instruction are more specific and varied primarily because these environments are more numerous. Examples at the individualized learning extreme are more general primarily because of their scarcity. It must be recalled at this point that this paper is based on an empirical survey and does not present theoretical levels of development.

Instructional System

Basically, individualized instructional environments contain a series of steps identified as an instructional system. An instructional system is generally a closed environment and may include anywhere from one or two very specific behaviors to several broad behaviors or even hundreds of behaviors. Instructional systems generally include the following components.

1. Terminal behaviors -- might be stated as general goals.

2. Sub-objectives -- the specific behaviors required as discrete pieces of the terminal behavior.

3. Kinds of learning -- specific behaviors may be defined in terms of a taxonomy of objectives (i.e., Bloom, et al, Krathwohl, et al) or Gagne's levels of learning.

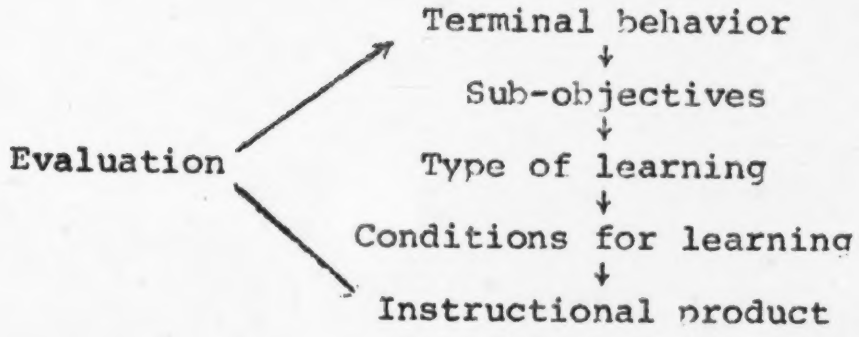
4. Conditions for acquiring behaviors -- the environment within which specific behaviors identified may be acquired is described.

5. Instructional product -- an instructional package that will provide a learner with the environment required to promote specified behaviors.

6. Evaluation -- a set of conditions designed to determine both a learner's need for the specified objectives (diagnosis) and/or his level of mastery of the behaviors following interaction with the learning environment.

Fig. 4

Instructional System




These components are generally found in commercially available packages as well as teacher made learning activity packages and/or student contracts. Teachers learn how to apply components of the system to their own level and/or academic content area either directly through workshops and/or 'courses' or indirectly through use of commercially prepared packages.

Both situations have been observed (i.e., one setting where IPI mathematics served as the commercial package and one setting where staff development time became part of a school building program) and school personnel appear to be at the same level of development in both settings after three years of focus on individualized education. Teacher attitudes in both situations developed slowly, administrative insight aided in providing appropriate materials and resource personnel and now a variety of alternative learning environments are available for learners in both school settings.

Physical Conditions

Although many new buildings have been designed specifically to accomodate a variety of learning environments for individualized education, such a building is far from being an essential prerequisite. Self-contained classrooms in twenty-year old, 'egg crate' buildings in Rye Neck and Plainedge have highly individualized programs. Classrooms contain sufficient activity centers to provide for pursuit of a multitude of needs by individual children.

Also observed, at the other extreme, was a brand new building with a very attractive central multi-media core surrounded by open spaces in which teachers had erected

portable barriers to enclose their intact groups where each and every child turned to page 21 at the snap of a finger.

Two considerations are apparently taken under advisement when arranging physical environments for learners. First, 'knowing' the child by at least one teacher and second, sufficient flexibility in the environment to allow for all individuals to interact with appropriate learning environments.

Because knowledge of learner ability and learning styles is a key to success for efficient teacher placement of individual learners in appropriate environments, it follows that the fewer teachers a learner encounters, the greater will be his chances of being 'known'by at least one teacher. It also follows that if knowledge of a learner is so critical; if the learner is passed from one teacher to another, it is incumbant that as part of that transfer all knowledge about the learner also be transferred. This could obviously result in an extremely inefficient use of time. (Placement of children in an environment for any purpose other than meeting his needs is usually done to accomodate an administratively devised organization pattern such as team teaching.) However, small spaces found in classrooms of older buildings, even though they contribute to 'knowing' each child by a teacher, are also far from ideal because of the limited space in which to establish alternative learning environments.

A compromise between learner access to different learning environments and opportunity for that learner to be 'known' are now being sought. Variations of just such a compromise may be observed in the Kirk Road School in Greece with 300 children in one open space, Dansville Primary School with 120 children in a cluster and the Gates-Chili Walt Disney School with sixty to eighty children per area.

Organization

Two basic levels of organization appear to be evolving in individualized settings. Self-contained classrooms or similarly defined units serve as focal points of individualization at one level while total school participation in a coordinated plan appears to form a second level.

Within self-contained or similarly defined units, the emphasis is on teacher familiarity with individual learners. Limited space necessitates a verbally oriented program with some manipulative activities introduced at varying points in the day or season as appropriate. Coordination between rooms and/or units is maintained even though autonomy within units predominates.

The total school program can be either verbally or manipulatively oriented with a verbal emphasis in greater evidence. A centrally located facility or resource generally

serves as the focal point for individualization at this level of organization. IPI and instructional media centers are illustrative of this organizational arrangement.

Behavioral Objectives

Most individualized programs are based on behavioral objectives. Although some educators feel they have content oriented individualized programs, such programs usually turn out to be remedial and/or enrichment oriented for a few children at either extreme with the bulk of each class participating in a traditional group oriented structure.

It has been interesting to note that recent developments in instructional materials (i.e., Man-A-Course-of-Study) cannot be accomodated in a content oriented approach but are rapidly absorbed by behaviorists.

Diagnosis

Content oriented approaches are easily served by a number of traditional standardized achievement tests. However, instructional systems based on behavioral objectives almost universally require a set of diagnostic measures uniquely adapted for that system. So critical is this compatability between objectives and diagnosis that rarely does one see either in isolation.

Diagnosis in small settings (i.e., self-contained classrooms) tend to be highly informal and tends to increase in formality directly proportional to the increase in size of groups and number of personnel responsible for the group.

Scheduling

Individualized programs have generally retained scheduling as an essential element but do so at an individual level as compared with the group schedule in traditional structures. Each learner in an individualized environment has a unique schedule prepared on either a daily or weekly basis. Four individualized elementary programs have been observed where the structure of individual schedules has been completely removed and each program can be singularly classified as 'chaotic'. Structure is not abandoned in viable individualized settings although it is apparent that learners possess more control over the structure and each individual has a unique structure.

Conclusion

A meeting with public school officials identified as individualized educational leaders and Title III Center representatives was held to present findings to this survey and clarify next steps. While this group of educational leaders concluded that New York State is still in early stages of

individualized development they were very effective in contributing to the identification of a goal for individualization. Their goal, defined in terms of observable events visible in an individualized setting, is summarized below.

Observable events

1. Learners (all ages) working at different tasks.
2. Learners selecting learning material.
3. Learners selecting media.
4. Difficult to find and/or identify 'teacher'.
5. Learners are excited, happy and friendly.
6. Learners using non-school resources.
7. Learners using teachers, children, adults and wide variety of physical resources as learning referents.
8. Learners move freely with obvious purpose.
9. Adults are responsive to learner needs and desires.

Recommendations, needs and next steps were also defined by this group of educators and steps are now being taken to move in directions outlined below.

Recommendations

1. Secure SED support for model programs serving as visitation and training sites.

2. Provide inservice training opportunities.

3. Devise a general strategy for school development of individualized instructional programs to meet local constraints such as buildings, physical resources, staffing, etc.

4. Devise general strategies for educating parents and community groups.

5. Identify key change agents in the state.

6. Validate effectiveness of individualized instruction.

Needs

1. Disseminate information about:

   a. ongoing programs,
   b. available individualized instruction materials,
   c. individualized instruction diagnostic strategies,
   d. progress record keeping systems.

2. Conferences, demonstrations and inservice courses to develop teacher competency in individualized strategies.

3. Develop evaluation strategies for use in individualized instruction programs.

4. Provide for increased teacher time to develop individualized instruction strategies.

Steps

State

1. Establish a dissemination network

   (SUC at Brockport will serve as a clearinghouse for information -- see attached form for specific items currently being sought.)

2. Identify resources available for developing training strategies identified under recommendations and prepare a schedule of anticipated developments.

   (Individualized Instruction Council Meeting in December will attack this task.)

3. Develop strategies for evaluating individualized instruction.

   (A research design is now being developed and will require your assistance in carrying it to completion.)

Local

1. Prepare general awareness type conferences with available resources

2. Develop action oriented programs.

   (See attached two-day program scheduled for Suffolk County and three-day program for Westchester County.)

3. Secure administrative support from local schools potentially capable of serving as model visitation sites.

# INDIVIDUALIZED INSTRUCTION IN THE NONGRADED SCHOOL

by Dr. William McLoughlin

Discussions of individual differences and individualization of instruction frequently mislead one into believing these are new educational problems. Of course they are not. They are virtually as old as education itself. Nearly every prominent educator from Plato down to the present has commented on the implications of human variability for instruction. By 1961, three short decades after its first publication, the Education Index listed over six hundred entries for individual differences and more than 250 under individualized instruction.

Similarly, we are prone to forget American schools prior to 1850 were ungraded schools. Children of different ages met in one room with one teacher and progressed at their own rate through the few instructional materials available. I do not mourn the passing of the one-room schoolhouse nor opt for its return. Its numerous inadequacies make such a position untenable. I merely wish to point out that even in the one-room school the instructional implications of individual differences were recognized. But as enrollments grew, the inability of the one-room school to deal effectively with individual differences became increasingly apparent. As early as 1830 Horace Mann and Henry Bernard were endorsing the graded school as a more effective way of dealing with individual differences and individualizing instruction. In contemporary discussions of school organization and individual differences, the graded school is rarely credited with attempting to resolve the instructional problems stemming from individual learner differences. Yet it was possibly the

first, though by no means the last, attempt to resolve the instructional dilemma caused by individual learner differences through organizational changes.

But the instructional problems associated with individual differences are so vast that they defy simplistic solutions. Children, even of the same chronological age, differ so greatly in learning abilities that the graded school was scarcely an adequate solution to the instructional problems eminating from individual learner differences. The total vocabulary of first graders, for example, ranges from 6,000 words to 48,800 words.[1] In an effort to control these and similar differences and to facilitate instruction the well-known and often-castigated system of retentions and double promotions emerged as another attempt at reducing learner variability.

For over a century educators have tried one desperate solution after another in their futile efforts to correct the weaknesses of the graded school for dealing with individual differences. Each of these attempts at perfecting grade-level group instruction as the method for dealing with the instructional problems produced by individual learner differences added to our knowledge of individual differences and learning. We know, for example:

1. Children of the same chronological age are probably alike on few other traits.

2. The achievement of children in the same grade varies greatly. Less than 20% of the 4th graders in most schools achieve at grade level[2] and only about 5% of the 5th graders have reading scores between 5.1 and 5.5. In fact, the best estimate of the variation in achievement in a

grade is obtained by taking 2/3 of the chronological age for the grade. Fourth graders, generally are 9 years old and 2/3 of 9 is six.[3] Usually, then, one would expect a range of six years in achievement in the typical fourth grade.

3. Additional schooling does not lessen the initial differences found among children. Rather, the magnitude of these differences increases with added schooling. This finding, as you know, has distressed members of minority groups and caused them to question both the quality and equality of educational opportunities available to children in our schools.[4]

4. The range of differences in achievement for each child in the subjects traditionally taught in the elementary school is approximately as great as the range of differences for the entire class.

5. In any subject, like arithmetic, there is considerable variation in the achievement of each child. That is, a child may have 5th grade addition skills, 3rd grade division skills, and 6th grade skills with fractions. Achievement for any individual, even within a subject area, is not even and monolithic.

6. Retention in grade is a very poor procedure for reducing individual differences. As a matter of fact, the accomplishments of grade retention for reducing individual differences are sufficiently undistinguished to warrant calling <u>it</u> into serious question as a workable procedure for individualizing instruction. For every child retained in grade showing a gain in achievement, for example, there are two who show no gain and two who show losses in achievement.

7. Though the chances of improving academic achievement through retention in grade are minimal the chances of producing ~~emo~~tional problems in children, anti-social behavior and early termination of formal education are greatly improved.

ALTERNATIVES TO THE GRADED SCHOOL:

Essentially, then, grade-level group instruction and retention in grade, while honest efforts at coping with individual differences, are clearly ineffective instructional practices. In fact, the emotional and psychological carnage left in the wake of relentless conformity to these procedures for reducing learner variability within a class screamed out for more viable and humane alternatives to individualizing instruction. Response to this plea was not wanting.

The graded school you will recall, first appeared in America about the middle of the 19th century. To be exact, the first graded school opened in the Quincy Grammar School in Boston, Mass. in 1848.[5] By 1871 virtually every school in America, even the one-room rural schoolhouse, was a graded school. But by the end of the 19th century efforts were underway to "break the lock-step" approach to education found in the graded school. In 1888, for example, Preston Search was developing procedures for the individualization of instruction in the schools of Pueblo, Colorado, and by 1911 Frederick L. Burke and his associates at the San Francisco State College Training School were individualizing instruction in all curriculum areas requiring the least amount of group contact. This, as some of you doubtlessly recognize, was the precursor of a number of "laboratory approaches to education" like the Winnetka Plan.

## THIRTY-FIVE MAJOR EDUCATIONAL PLANS FOR COPING WITH INDIVIDUAL DIFFERENCES

1. Upgraded groups
2. Primary-intermediate grouping
3. Grade-level grouping
4. Heterogeneous grouping
5. Homogeneous grouping
6. XYZ grouping
7. Intra-subject-field grouping
8. Departmental grouping
9. "Vestibule" grouping
10. Hosic's Co-operative Group Plan
11. Winnetka Plan grouping
12. Dalton Plan grouping
13. Multiple-track grouping
14. Platoon grouping
15. Social maturity grouping
16. Developmental grouping
17. Organismic-age grouping
18. Social maturity-teacher personal grouping
19. Ungraded Primary grouping
20. Ungraded intermediate plan
21. Split grade or "hyphenated" Groups
22. Intraclassroom grouping
23. Interclassroom grouping
24. Intergrade ability grouping
25. Grouping within the classroom through teacher-pupil planning
26. Self-selection grouping
27. Extracurricular activity grouping
28. Special grouping for the gifted
29. "Opportunity Room" grouping for the slow-learning or mentally handicapped
30. "Self-realization Room" grouping for the gifted
31. Ungraded four-and five-year old kindergarten grouping
32. The Woodring Proposal
33. The Trump Proposal
34. The Newton Plan
35. The Rutgers Plan

The floodgates for "Plans" to individualizing instruction were now opened and American education was soon to become inundated with such propositions. The St. Louis Plan, the Dalton Plan, the Batavia Plan, the Elizabeth Plan and "Plans" far too numerous to list became the educational innovations of the late 19th and early 20th Century. Shane for example, lists 35 -- (chart) such attempts at individualizing instruction.[6] Each of these plans had its moment of glory and was eventually discarded for little use or considerable abuse.

All these efforts had two things in common. First, they were not thorough-going rejections of the basic approach of the graded school for individualizing instruction through group teaching of children assumed to be similar. At best they were meaningful but faulty attempts at vulcanizing the wholes in such an approach for coping with individual differences. Second, each of these "Plans" sought new organizational devices for adjusting the child to the instructional offerings of the school but never once looked for ways of adjusting the instructional offering of the school to the child.

## THE NONGRADED SCHOOL AND INDIVIDUALIZATION OF INSTRUCTION

Perhaps the most viable alternative to the graded school to emerge from this movement was the nongraded school. Unlike the other educational propositions purporting to recognize individual differences and individualize instruction accordingly, the nongraded school does not seek to bolster the sagging graded school. Rather it begins by denouncing the graded school with all its works and pomps and suggests children's progress through school should be continuous and devoid of artificially

induced skips or lags. Furthermore, such an educational goal can only be realized by adapting instruction to the child's learning needs and not, as previous proposals for the individualization of instruction suggested, molding the child to fit the school's instructional program.

Though this approach was first tried in Bronxville, New York in 1925 it did not receive critical acclaim until the appearance of the Goodlad and Anderson book on the nongraded school in 1959.[7] While well-intended, the message of the nongraded school is at best vague and its translation into practice leaves much to be desired. Almost without exception converts to the nongraded school rely on one or more of the organizational schemes mentioned by Shane to individualized instruction. Also, and again virtually without exception, no substantial changes in instructional procedures accompany contemporary plans to nongrade the graded school. Reliance is placed on group instruction as the method of of ministering to individual differences. Viewed from this vantage point most efforts made to nongrade the elementary school are little more than tired re-runs of inefficient and ineffective administrative gambits at grouping away the influence of individual differences on instruction.

A casual analysis of the characteristics of most efforts at nongrading reveals a hierarch, not of quality but organizational complexity, in the schemes developed to individualize instruction.

1. Without altering so much as a grade label, some schools simply announce they are henceforth nongraded. Teachers are instructed to accept children where they find them and bring them as far as they can

go during the year. Visitors to these nongraded programs frequently observe that they are doing nothing in these schools not being done in the typical graded school. The reason visitors have difficulty observing differences is because there are none to be seen. Class organization, teacher assignment and pupil assignments are unchanged and so, lamentably, are the instructional practices. This approach, I suppose, simply verifies the adage that a graded school by any other name surely smells.

There is, however, something inherently reprehensible in such an approach to educational change. Essentially it maintains that teachers all along have the ability to individualize instruction under the present educational arrangement but simply withhold this type of instruction until they receive administrative approval. I simply do not believe this to be the case any more than I believe programs founded on this approach to the individualization of instruction are effective.

2. The next procedure used for nongrading a school and individualizing instruction is only modestly more complex. The basic design of the graded school is retained - one teacher for one self-contained class for one year - except now children of similar achievement and/or ability are grouped for instruction. Utilizers of this procedure, by the way, never refer to it as homogeneous grouping, either, and are vehement in their denials that their nongraded plan is homogeneous grouping revisited. They justify such an arrangement of children by observing that it greatly reduces the range of differences within the class; eases the teacher's job and makes individualization of instruction

not only feasible but attainable.

It may be graceless to observe that the major purposes of nongrading and other respectable efforts to individualize instruction are not (1) to ease the job of instruction for the teacher but facilitate learning for the child; are not (2) designed to <u>mask</u> individual differences among children by bringing children of assumed likenesses together for instruction but to create an instructional setting which will magnify each individual's uniqueness bigger than life so something may be done to capitalize on those differences; and (3) these efforts, which are at best thinly disguised homogeneous grouping schemes despite the protestations of their supporters to the contrary, have been exquisitely distinguished in the past by their failure to influence either student achievement or adjustment.[8] Even more discouraging, however, is the fact that those espousing this brand of nongrading seem marvellously unaware that what they have done is introduce into their schools in the name of nongrading an organizational scheme developed to preserve the graded school from complete collapse.

3. Large schools frequently use "cross-class grouping" to produce nongrading and individualize instruction. Essentially the grade structure is preserved and children "on the same grade level" are regrouped for instruction in reading and sometimes in arithmetic on the basis of their past achievement in these subjects. Obviously these procedures are more concerned with <u>group</u> learning needs than with <u>individual</u> learning needs for it is simply another effort to individualize instruction within the framework of group instruction.

4. Smaller schools use an adaptation of cross-class grouping to nongrade their schools and individualize instruction. Typically, the primary grades are viewed as a single instructional unit. During the day children from these classes are regrouped for instruction in reading and sometimes in arithmetic. Again, the single requirement for inclusion in any group is similarity of achievement in reading and/or arithmetic. It goes without saying a mere willingness to transgress established grade lines to form classes for instruction in reading is a poor guarantee that instruction in these classes will be individualized.

Even if this were an effective way of organizing children for individualized instruction few schools would be willing to undertake the massive re-assignments of children such a plan dictates. If, in the 5th grade, for example, a class of 34 pupils is to be formed so the range of reading achievement falls between 5.1 and 5.4 the class would probably contain:[9]

8 - second graders

8 - third graders

7 - fourth graders

9 - fifth graders

2 - sixth graders

Furthermore, it is educational folly to pretend such re-arrangements of children accomplish anything. About the only way a homogeneously grouped class can be kept homogeneous is to teach them nothing for differences in learning rates alone assures us that children will differ greatly after instruction is begun.

5. Lastly, interage grouping - assigning children of different chronological ages to one teacher in a self-contained classroom for more than one year of instruction - is also found in non-graded schools. It is asserted such groupings permits teachers to really get to know children and see that vast differences in ability and attainment exist among children of the same chronological age. This, of course, is the condition that prompted the conversion of the pre-1850 ungraded schools into graded schools. Remember, while this organization of children may teach teachers a considerable amount about child growth and development it in no way provides them with additional instructional resources for coping with these differences. At best, such procedures do little more than complicate the instructional problems faced by most teachers.

THE NONGRADED SCHOOL AS A STEP ALONG THE WAY TO INDIVIDUALIZED INSTRUCTION

The affinity for the graded structure of those who would nongrade is reminiscent of the problem faced by the Australian bushman who bought a new boomerang - he couldn't throw the old one away. Some of you may feel the presentation so far is a senseless "over-kill" of the graded and the nongraded school or a short course in methods and materials to be used in the relentless nealing of a dead horse. There are, however, several reasons for such information saturation. First, the nongraded school - as presently practiced - can hardly be credited with being an unequivocal success in providing for individual learning differences. Perhaps the reason for this is the nongraded school, while an agreeable enough educational idea, is so vague and chameleon that it makes a poor blueprint for building a thoroughly new instructional program. Second, the answers

to the instructional problems produced by individual variabilities are not to be found in unique groupings of students but in unique instructional practices. Finally, the presentation should suggest the banning of innovations that simply re-discover past educational failures. Too many innovators are little more than educational archeologists who delight in resurrecting moldy plans for individualizing instruction. Without a doubt education would be better off if these schemes had been left to rust in peace.

PLANNING FOR INDIVIDUALIZED INSTRUCTION

Hastily conceived programs for individualized instruction will probably rediscover many of the ineffectual educational practices detailed above. Viable individualized instructional programs eminate from carefully planned strategies for educating each individual to the fullness of his potential. Basic to such planning are:

1. The individual instructional programs developed deal with individual differences, not group similarities.

2. The individualized instructional program is at least a school-wide program, but hopefully a district-wide program. Most home-grown educational innovations are under planned and over sold and eventually die from an acute attack of administrative jitters. Apparently administrators fear direct confrontations with incompetent instruction and justify their "hands off" approach to educational improvement by pointing to anticipated adverse teacher reactions. More often than not they simply meet the instructional problems produced by individual learner differences by pledging support to any teacher willing to try to indi-

vidualize instruction in her classroom. We must realize schools are not places where teachers come to "do their thing" for better or for worse until retirement do we part. Effective programs of individualization of instruction must be considerably more than a tour de force for an occasional willing and competent teacher. Individualized instruction must be a characteristic of the educational program of the entire school - something available to each and every child in the school - and not a random, uncontrollable occurance available to a limited number of children on an unpredictable schedule in an indeterminable number of classes.

3. A basic re-casting of the role of the teacher in the instructional process is necessary if effective and durable programs for individualized instruction are to be developed. Traditionally, the responsibility for producing learning has been an exclusive teacher responsibility with little or none of the responsibility for causing learning given to the instructional materials used. Ironically, teachers typically meet this instructional responsibility by teaching an adopted textbook of unknown instructional merit. However, there must be a reapportionment of responsibility for producing learning in an individualized instructional program. In such a program increasing responsibility and accountability for learning must be placed on the instructional materials used. It is clearly impossible for a teacher, even the most dedicated teacher, to satisfy all the individual learning requirements of all of the children in all learning areas of the school curriculum. Building an individualized instructional program on the tacit assumption

that teachers can do this is to court failure from the outset. Essentially, we must demand much more teaching effectiveness from the instructional materials in use and require teachers to become increasingly proficient in recognizing and supporting the learner's expanding capacity to become an independent learner.

4. Systematic development of individualized instructional programs must replace the haphazard, now-and-then approaches characteristic of so many contemporary efforts at individualization of instruction. Such an approach develops a consanguineous relation between (a) the purposes of instruction; (b) the instructional procedures developed for realizing these purposes; and (c) the evaluation procedures employed to assess the adequacy of instruction and the scope of learning. Few contemporary efforts at individualized instruction exhibit such characteristics. Generally, no over-arching structure for the curriculum has been developed which guides and directs both the instructional and evaluation procedures used in the program. Usually, most efforts at individualizing instruction are little more than one teacher's efforts to develop worksheets which permit students to progress through the basal textbook at a rate acceptable to the teacher.

Implicit, too, in a systematic approach to the individualization of instruction is the interchangeability of instructional materials. This requirement alone should discourage schools from undertaking the production of these materials. Immediately one is asked: "Why can't teachers produce these materials?" Implicit in this question is the assumption that teachers have both the expertise and desire to do this job. If this were so there would be little need for the question since the

materials would more than likely have been developed and in use in schools. But such undertakings require the use of rather sophisticated constructs about teaching and learning, constructs which the typical teacher has not developed. Usually teacher discussions of learning and instruction focus on the value of democracy in education and techniques for motivating students, while the learning outcomes they desired are in the area of cognitive development. Lastly, it assumes teachers have orderly routines for dealing with learning difficulties. An analysis of the instructional procedures found in the typical classroom seriously challenges this assumption.

More mundane reasons for discouraging teacher production of the instructional materials needed for an individualized instructional program may be cited, too. Cost is one such factor. Increasingly, teachers are demanding and receiving compensation for the work done to produce instructional materials. This expense, when added to production costs, probably inflate the price of locally developed instructional materials well beyond those of most commercially available materials. Furthermore, the materials produced in such ventures seldom become an integrated part of the school's instructional program. Experience verifies this! Wher, for example, was the last time those instructional materials you so diligently labored to produce for your class five, two or even one year ago were last used? Administrators, too, know teachers, even beginning teachers, are hesitant to use instructional materials developed by their colleagues. The discouraging legacy of local efforts to develop materials for an individualized instructional program is an

enormous, disorganized, under-utilized collection of ditto masters that are considerably more trouble to locate and run off than they are worth.

5. A carefully-developed and continuous inservice program for introducing teachers to individualization of instruction must be an integral and ongoing part of the school program. Too often schools undertake pervasive educational changes with little or no consideration given to developing procedures for the preservation and refinement of these innovations. Apparently, these schools assume the staff planning the innovation will implement and operate it. This is rarely the case. The typical school has a 70% to 80% staff turnover in a ten year period. This means that teachers with few if any of the understandings of the program developed by those creating them are expected to operate these programs. Lack of effective and efficient indoctrinating procedures is one of the most serious shortcomings of most innovative efforts.

6. Detailed evaluation procedures should be formulated concurrently with program development. Too often the intense desire to put an educational idea into practice is so overpowering that little or no attention is given to developing procedures for evaluating the efficacy of the innovation introduced. Inexorably in May or June an evaluation of the program is requested and an unsystematic, uninterpretable collection of teacher and administrator opinions about the presumed merits of the program are bound in report form. Programs worthy of introduction into schools should also be worthy of the best possible evaluation available. This implies ongoing and pervasive evaluation, that is, all aspects of the innovation, not simply student achievement, are assessed.

## SOME SPECIFIC PROCEDURES FOR INDIVIDUALIZING INSTRUCTION

I hope what I have been giving you is a tall order and not simply a tall story. A list of specific references to procedures helpful in filling this order has been distributed.

1. Behavioral Objectives: Virtually every serious effort at individualization of instruction uses behavioral objectives. If you or your staff are unfamiliar with behaviorally developed instructional objectives you may want to consult the works of Mager or Vargas in this area or use the Vimcet materials developed for group instruction in the purposes and preparation of Behavioral Objectives.

These are valuable sources of information on the nature of instructional objectives. I do not, however, recommend teachers spend time and energies writing behavioral objectives for acceptable behavioral objectives far too readily available elsewhere.

The 4000 or so behavioral objectives developed for PLAN, for example, are available from the Westinghouse Learning Corporation for under sixty dollars and the Instructional Objectives Exchange of U.C.L.A.'s Center for the Study of Evaluation sells numerous lists of behavioral objectives in a wide range of instructional areas for minimal costs.

2. Commercially Prepared Programs: Schools seriously considering individualizing instruction should look carefully at commercially prepared programs already developed before developing their own program. I.P.I. (Individually Prescribed Instruction) out of the University of Pittsburgh and Research for Better Schools in Philadelphia and PLAN (Planned Learning in Accordance to Need), the Westinghouse Program, are

perhaps the two most ambitious works in this area.

Programs of this type are not give aways. PLAN, for example, costs a school district approximately $100 a year a child to operate after initial fees have been paid. A complete breakdown of the costs are as follows:

| | ANNUAL CHARGES FOR A SCHOOL OF 400 PUPILS |
|---|---|
| TEACHING LEARNING UNITS ($6.00/child/month) | $24,000. |
| COMPUTER CONTROL ($2.80/child/month) | 11,200. |
| COMPUTER LINE AND TERMINAL CHARGES ($2.00/child/month | 8,000. |
| | $43,200. |
| INITIAL SIGN-UP CHARGES (one time only) | 5,000. |
| SUPERVISOR TRAINING CHARGE (one time only charge) | 500. |
| TEACHER TRAINING CHARGE ($300/week/teacher) | 4,800. |
| | 10,300. |
| | $53,500. |
| SUPPORT MATERIAL CHARGE (varies with amount of equipment and utilization patterns of the school). | |

Some educators seeing these program costs for the first time negate the possibility of such an approach to individualization of instruction by saying "my board will never buy it." Possibly we are over -quick to diminish the efforts made to support education and even use our fiscal woes as reasons for doing nothing. We point with almost masochistic pleasure to the fact that last year the world only spent $100 - a child

on education but $7,800 per soldier. While allocating $110 billion of its resources to education it invested a wopping $159 billion in armament.[10] We are quick to conclude from these and similar data that schools are not getting their fair share of the tax dollar.

This is far from the whole story of educational support. In the past two decades educational spending in the United States increased five-fold while personal consumption merely doubled. In the same period school enrollments increased 88% but school expenditures, in constant dollars, increased 35%. While employment in private industry increased 38%, employment in public education increased 203% (figure 2.)[11] The public has not been unwilling to support education.

If taxpayers are digging in their heels to resist school tax increases they may be justified for there is virtually no relation between the money spent on education - per pupil expenditures; community tax rate, teacher salaries; pupil-teacher ratios; number of administrators per 100 pupils - and educational attainments (table 1). Even the feeble relations between grade 6 reading achievement and educational expenditures virtually vaporize by the 10th grade. About all increases in staff size and salaries increases is the size of the educational tax bill.[12]

Even using factor loading techniques (table 2) to augment the analysis does not seriously alter the picture previously presented.[13]

I have no desire to dazzle you with fancy statistical footwork. It is far too late in the day for that. I simply wish to replace the conjecture and wishful thinking that shroud discussions of the efficacy of increased educational spending on educational attainments with hard

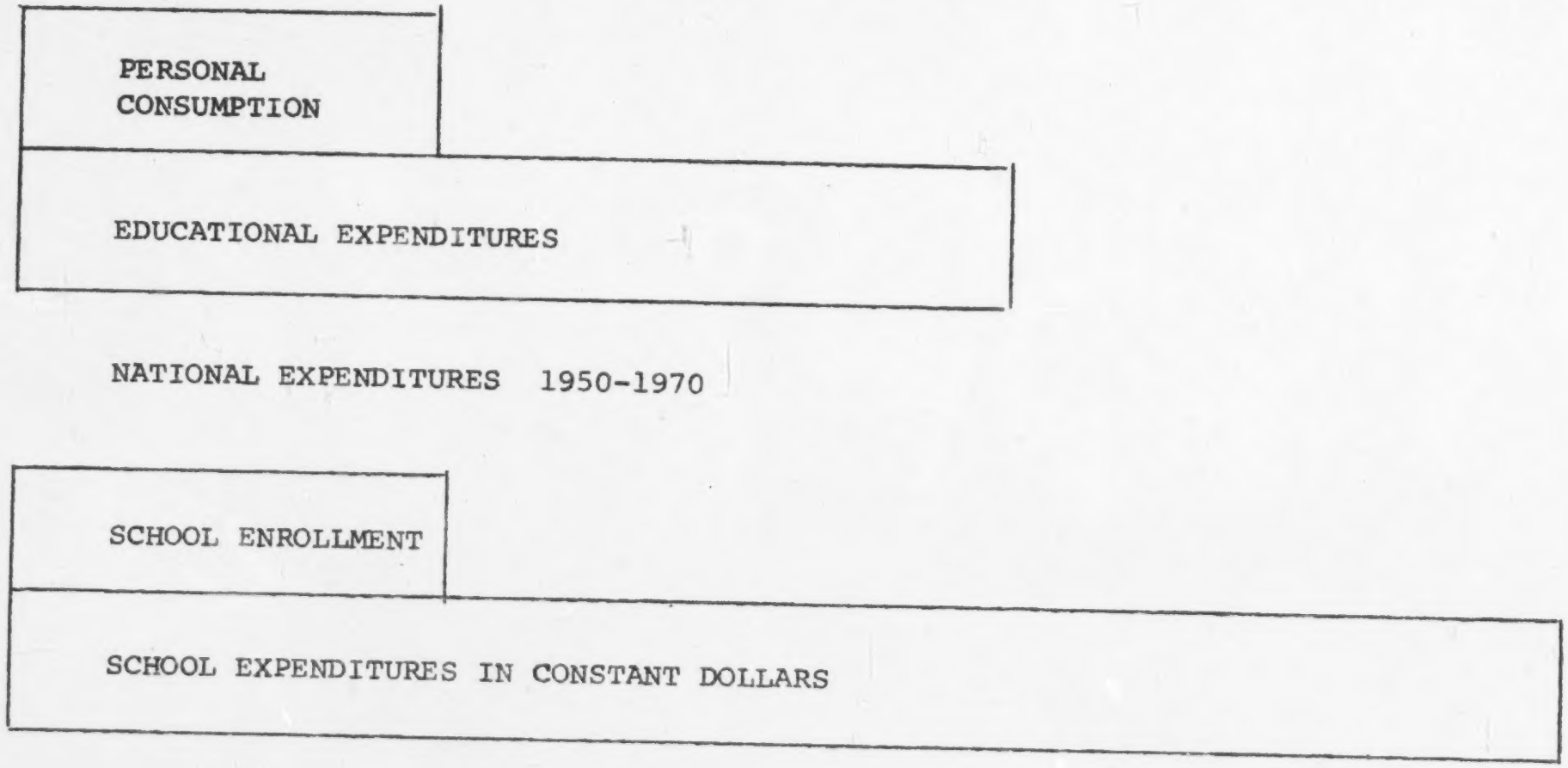



FIGURE 2. Comparisons of percentage increases for educational expenditures and expenditure increases in other segments of the economy.

| | PER PUPIL EXPENDITURES | TAX RATE | TEACHER SALARY | TEACHER - PUPIL RATIO | NO. OF ADMIN-ISTRATORS/ 100 PUPILS |
|---|---|---|---|---|---|
| 1. Grade 6 reading | .23 | .21 | .18 | .18 | -.09 |
| 2. Grade 10 reading | .08 | .06 | .02 | -.03 | -.06 |
| 3. Per Pupil Expenditures | | .35 | .53 | .42 | .47 |
| 4. Tax Rate | | | .54 | -.06 | .24 |
| 5. Teacher Salary | | | | .18 | .45 |
| 6. Pupil-Teacher Ratio | | | | | .01 |
| 7. No. Administrators/100 | | | | | |

TABLE 1. Correlations among educational cost factors and 6th and 10th Grade reading achievement scores.[1]

1. Jensen. Op Cit. p. 5

| INSTRUCTIONAL COST VARIABLES | GRADE READING SCORES 6 | 10 |
|---|---|---|
| 1. PER PUPIL EXPENDITURES | .23 | .08 |
| 2. TAX RATE | .21 | .06 |
| 3. TEACHER SALARY | .18 | .02 |
| 4. TEACHER/PUPIL RATIO | .18 | -.03 |
| 5. NUMBER OF ADMINISTRATORS PER 100 PUPILS | -.09 | -.06 |

TABLE 2. Rotated factor loadings for educational cost factors and 6th and 10th grade student reading achievement scores.[1]

1. Jensen, Op. cit., p. 6

data on this point. Traditionally the public has been lead to believe money was the solvent for all instructional problems and the yellow brick road to educational excellence is paved with smaller classes and larger and better paid staffs. Taxpayers once endorsed this solution but are now disappointed with it. Most of them, too, do not necessarily demand more bang for the buck. They would gladly settle for an occasional pop.

Suggesting the merits of the "big package" of commercially developed instructional materials as the starting point for a local effort to individualize instruction is characterized and rejected as the impossible educational dream. Solutions short of this are solicited. Inherent in this quest is tacit recognition of the merits of "the big package" approach to the individualization of instruction but a willingness to make do with second-best solutions. I am not countenancing reckless educational spending, but I am suggesting that those coverting educational innovations be innovative themselves. I feel the time may have come when we must stop asking boards of education what they can do for our instructional program and start asking ourselves what alternatives to increased spending we can develop for these programs.

Innovations, like charity, begin at home. In days of tight money, unique solutions should be developed for obtaining the innovations desired. Creative use of available resources placed at our disposal may contain the solution to our problems. I know one educator, for example, who filled one first grade teacher opening with two half-time teachers. Besides providing valuable opportunities for using unique staffing pat-

perns, the money saved in contributions to auxiliary compensation, contributions to retirement funds, medical insurance, etc., was used to purchase additional instructional supplies and services. Boards of education must be presented with alternatives to the funding needs of innovative schools. They simply can not be asked regularly and relentlessly to dig deeper and deeper into the tax-payer's pocket for more dollars for these programs.

Earlier I suggested the solution to the instructional problems of individual differences were not to be found in group manipulations exclusively. Now I suggest the solution to individualized instruction does not lie in perpetual use of the same old tired solutions that have failed us for so long.

3. Taxonomies of Education: Increasingly we are coming to realize the variability among humans is enormous and the solutions to the instructional problems produced by these differences limited. Essentially, most available solutions to the instructional problems resulting from individual differences focus on a single aspect of learner differences -- differences in learning rates. Qualitative differences are known to exist among learners, too. Time does not permit a critique of the references distributed but I would like to draw attention to the Bloom and Grathwohl citations listed. Together these taxonomies could provid a framework for assessing the scope of the learnings provided by the school's curriculum. These taxonomies of themselves will not cure an ailing curriculum but they should provide valuable insights into what is killing the school's efforts to individualize instruction.

4. Individualized Instructional Materials: Increasing amounts of material on individualized instruction is appearing on the market. The hand-out lists a number of these materials. These materials pay fleeting homage to learner differences in areas other than the cognitive and the skill development areas but their principal focus is on learning-rate differences in these. Despite desires to the contrary, knowledge of learning differences in domains other than the cognitive and the skill areas is far from complete and exhaustive. Furthermore, our ability for dealing effectively with the identifiable differences in these areas is somewhat less than crude. I mention this simply because the practitioner must determine the instructional value derived from swapping speculations about such differences particularly when these discussions tend to terminate in blind alleys and no action.

5. Systems for Evaluation: Evaluation, obviously, is a particularized activity and can not be discussed intelligently in advance of a detailed description of the goals and procedures used to achieve specified outcomes. In this sense it is not possible to provide a system for evaluation prior to program development. However, C. A. M. (Comprehensive Achievement Monitoring) has an overall assessment design which may provide schools interested in individualizing instruction with a framework for developing a sound procedure for program assessment.

## CONCLUSION

The discussion of individual differences and individualization of instruction has come full cycle. While the instructional difficulties produced by individual learner differences are clearly not new

educational problems, this does not mean viable solutions to these problems are not urgently needed. What has been learned about individual differences from earlier efforts to deal effectively with the instructional problems they produce fills many books. The yet unanswered questions about individual differences, however, fills many libraries. If, indeed, the past is truly prologue, it must be scrutinized for stockpiling outmoded organizational gimmicks and empty dictums about individual differences has passed. Both the public and the profession have drunk too long and too deeply of these old wines to mistake them, regardless of the newness of the bottle, as the elixir that will cure the instructional problems produced by individual differences. A brave new world of instructional procedures for working effectively with individual differences is being developed; it could decline and fall for want of brave new educational leadership.

## FOOTNOTES

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4. Commercially Prepared Programs:

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Program for Learning in Accordance with Needs. Phil Sorensen, PLAN Regional Adviser, 6612 57th Avenue South, Seattle, Washington 98118.

5. Systems for Evaluation. The system for evaluating an individualized instructional program, obviously, should be derived from the program's aims, goals and objectives. In that sense, it is not possible to provide the system of evaluation in advance of the program. However, CAM-Comprehensive Achievement Monitoring, has particular aspects which may be valuable in developing an evaluation system. Further information on CAM may be obtained from:

Dr. Robert P. O'Reilly
Division of Research
University of the State of N.Y.
State Education Department
Albany, New York 12224

## FUTURE ACTION AND PROGRAMS

by Dr. Ted Grenda

If all of us leave today pondering the question, "What is Individualized Instruction?," and we then pursue a search for the answer to that question, this conference will have been an overwhelming success.

My job is a very difficult one. I think ending a conference so that you feel that you've taken away a product and some deeper understandings of what we have been talking about is exceedingly difficult. Next time if we repeat this conference, I'm going to ask to be the keynote speaker because I think I can provoke more questions than provide answers.

I have a feeling that one reason I've been asked to do this is because of an experience I had recently where I visited a principal. While we were talking the telephone rang and he talked to someone at the other end to whom he said, "Unbelievable!, but send him down." Then he turned to me and said, "There's a young man coming down here. He was eating in class and the teacher said, 'What are you doing, Johnny?' The young man answered, 'I'm eating a teacher's sandwich.' The teacher asked, 'What's a teacher's sandwich made of?' and he said, 'Baloney, so she's sending him in to me." So Johnny came into the room and the principal said, "Johnny, what are you doing?" (He's still eating the sandwich), and he said, "I'm eating a principal's sandwich." "What's a principal's sandwich made out of?" Johnny replied, "Baloney." The principal said, "You leave and don't come back until I've seen your parents." Well, being very humanistically inclined, I said, "Wait a

minute. Let me talk to this youngster, I've got all kinds of psychological experience, and I think I can help you." So I said, "Johnny, what are you eating?" and he said, "I'm eating a sandwich", and I said, "Aha! That's very significant. You recognize that when he was talking to the teacher, he said a teacher's sandwich, and when he was talking to you, he said a principal's sandwich. To me, he didn't say, Director of General Education sandwich." Then Johnny cut in, "Yeah, but I don't have enough baloney to take care of that!"

I think it's been a very good conference, and I feel that you should carry away certain things that at least have been very apparent to me. I think you should recognize that there is a lot going on in New York State on Individualized Instruction. Indeed there is a lot going on in the country on Individualized Instruction. It's obvious to me that there is a deep desire in Suffolk County to implement Individualized Instruction, and when I deal with gentlemen like these who are on the panel, it's also very obvious to me that there is a great deal of knowledgeable and dedicated leadership to bring this about.

If you are confused about what Individualized Instruction is, and how it should be implemented, you're in good company, because the questions that you are asking are exactly the same kinds of questions that are being asked across the country. You should be comfortable in knowing that there is a lot of help available and that we've already taken some steps to implement additional help for you. I'll tell you about that in a moment. However, before we proceed I think you should know that there are some very significant movements in this country, both

in the educational field and within the social fabric, which, I think, are going to dictate Individualized Instruction-or something very much akin to it.

To begin with, I was frankly disappointed that no one during the course of the conference said that Individualized Instruction is in a process of natural evolution--that it will come and that our role can only be that of either hastening it or hindering it. I believe that there is a very definite relationship between Individualized Instruction and open education, the British Infant School, and similar movements. I think that the two go hand in hand. I think that you should be aware of some fantastic technological advances either on the scene or are just over the horizon which are going to create delivery systems for the schools, that are either going to create problems for us or are going to facilitate educational programs in the individualized mode. Just the other day, I was reading that computers, a new generation of computers, are coming in the not too distant future. Right now, computers can only address themselves to one pigeon hole at a moment. The impulses can only ferret out information that is contained in any one particular pigeon hole. Obviously, it can be done at a tremendous rate of speed, but it's limited. The new computers are going to be operating--Iwon't say like the mind, because the mind is almost beyond duplication--but will be able to ferret out information from many compartments at any given moment. They'll be giving you responses and re-creating settings and feeling and perhaps even emotions that will give youngsters insights into previous historical events, into social concerns,

into incidents and happenings in their own lives. Computers are going to add tremendous new dimensions to the instructional program and the only way we're going to be able to cope with those technologies is through some form of individualization.

I think it should be obvious if you've been reading the New York Times that our critics have not been asleep. Admiral Rickover had two articles in last week's Times. Other critics still on the scene are concerned about the varying elements within the instructional program. I think Individualized Instruction offers us a mode which will be able to give attention to all the concerns of all of our critics, and still reflect the human concerns that I think we have been manifesting in this meeting. It should be obvious to you in professional organizations that the AFT and the UFT are becoming deeply concerned about many of the things that we've been talking about. If you're an administrator you've got to be on the lookout for professional organizations that are going to be pressing you on some of these instructional concerns.

I think you should know that there are fresh winds blowing within the State Education Department; that the State is indeed willing to work with districts in terms of easing regulations; and, that there is a process which we call "Redesign", which is just in its infancy. "Redesign" will address itself to a system of school districts that are going to be as different from one another as is a community in Suffolk County from a community in the Adirondacks; that each school district hopefully may be able to develop a program which will meet its own particular needs. This means that there has to be an easing of the law,

that there has to be an easing of Regents; that there has to be a re-examination of many of the evaluative and testing notions. In that area I happen to be Chairman of the Examinations Task Force which is looking at the entire program of State Examinations. We will be recommending within this year what a complete system of State services should be in this realm. As a matter of fact, we're coming back to Suffolk County next week to talk about that with parents, children, board members, administrators, and teachers. Indeed, I may get the opportunity to meet some of you at that meeting.

I think you should know that there are a series of concerns about the development of a continuous achievement monitoring system as alluded to in the remarks by some of yesterday's speakers. You should also know that universities and colleges are dissatisfied with the kinds of teachers that they're turning out and that some of them are beginning to get concerned about not only instructing students in an individualized way, but also about departing from the old course--you know, the six-course kind of notion. Don Nasca was telling me last night about a program he's advocating for Brockport. It would be an "open end", 30-credit program, for a student. The student would leave with a Bachelor's Degree, go into a school district, and would then develop a program of activities for herself or himself that would end in a Master's Degree. It would in effect be an internship program for that teacher. Now, if we can only get them to talk about Individualized Instruction as part of that, I think we would have something.

Further, there is a tremendous proliferation of instructional materials. Just yesterday at this conference, I encountered some new materials that I had not seen before. The commercial firms are going to be riding on the crest of the Individualized Instruction wave. This means two things: (1) We're going to have to be careful that we don't let the commercial enterprises overwhelm us with material that may not be as effective as we would like it to be; and by the same token, (2) We ought to welcome them into the Individualized Instruction camp and begin to specify the kinds of material we want. I think that those are things that you should bear in mind as significant things that are going to influence the course that you're going to be taking in your own classrooms. I don't want to minimize the impact that you, as individuals in those classrooms are going to have, but I think you should also recognize that you're not the only people who are making decisions. In effect, people, things and movements are making decisions for you.

Finally, you should know that the Individualized Instruction Council in New York State which is a small group of people that has neither the manpower, nor the money, but does have a deep-seated committment for the advancement of Individualized Instruction, is going to be trying to develop Networks of Individualized Instruction Councils throughout the state, so that people can develop services and get support for their programs on a regional basis. Indeed, we had a conference at lunch today with a number of people from Suffolk County and I have agreed that I will ask a number of them to come to Albany. We're going to

talk about the development of that kind of Individualized Instruction Council for Suffolk County. Some of you who were at that meeting will be invited, and I hope that you'll be hearing much more about this kind of Council. If you don't, don't blame me. Blame the people in this County for not having picked up the marbles, and developing this kind of Council.

In conclusion, I think that I've given you some insights into what you should be carrying away from this conference. And, what will I carry away from this meeting as an employee of a State which disseminates some 4 billion dollars for instructional purposes? The one thing that I carry away and the one thing that I'm very grateful for is a sense of committment on the part of a lot of professionals for the improvement of instruction, a sense of committment to improving the school scene for students, for children. I think that with this kind of committment, we can't help but be a success.

I'm very grateful to you for this two-day experience. I hope that you also found the two days very productive and useful.

# APPENDIX

# FEBRUARY PROGRAM

## Monday p.m.

| | | |
|---|---|---|
| 1:00-4:30 | Sign-in | |
| 4:30-5:30 | Dutch Treat Cocktails | |
| 5:30-7:30 | Dinner | |
| | Conference Opens-Admiralty Room | |
| 7:30 | Introductions<br>Welcoming Remarks | Dr. John Keough<br>Mr. Vincent King |
| | Definitions and Overview of Individualized Instruction | Dr. Donald Nasca |
| | Individualized Instruction in the Non-graded School | Dr. William McLoughlin |
| | Questions and Answers | Dr. William McLoughlin<br>Dr. Donald Nasca |
| 9:30 | Guests may attend any of the following: | |
| | 1. Film on "The Oakleaf Project" | Admiralty Room |
| | 2. Informal Talks with Resource Consultants | Chart Room |
| | 3. Auto Tutor (programmed learning) | Chart Room |
| | 4. Computer-based instruction | Chart Room |
| | 5. Display of Individualized Instruction Materials | Ship's Lounge |

## Tuesday a.m.

| | | |
|---|---|---|
| 7:00-8:30 | Breakfast | |
| 8:30 | First Session-Admiralty Room | |
| | Survey of Individualized Instruction in New York State | Dr. Donald Nasca |
| | Survey of Individualized Instruction in Suffolk County | Mrs. June Robinson |
| 9:00-10:00 | Work sessions of mixed groups to develop a plan for exploring, initiating, implementing or expanding a program of individualized learning | Group Discussion Leaders |

| Group | Location | Leaders |
|---|---|---|
| #1 | Admiralty Room-Front | Mr. Stanley Abrams |
| #2 | Admiralty Room-Rear | Dr. Ludwig Braun |
| #3 | Chart Room | Mr. Irving L. Carlin |
| #4 | Ship's Lounge | Mr. Gerald Devlin |
| #5 | Forecastle-Suite 41S (upper level) | Mr. Wilfred Gray |
| #6 | Forecastle-Suite 48S (upper level) | Mr. Barry Kane |

| | | |
|---|---|---|
| #7 | Foredeck-Suite 61S (middle level) | Mr. Alvin Kravitz |
| #8 | Foredeck-Suite 68S (middle level) | Dr. William McLoughlin |
| #9 | Foredeck-Suite 71S (top level) | Mr. Melvin Mendelsohn |
| #10 | Foredeck-Suite 78S (top level) | Mr. Roger Ming |
| #11 | Promenade Deck-Suite 21S | Miss Mary Flynn |
| #12 | Promenade Deck-Suite 28S | Mr. Charles Robinson |
| #13 | Skippers Cottage | Mr. Robert Sokel |
| #14 | Quarter Deck Cottage | Mrs. June Robinson |
| #15 | Bridge Cottage | Mr. James Womack |

10:00-10:30 Coffee Break - Main Dining Room

10:30-11:30 Return to group discussions

11:30-Noon Guests may attend any of the following:

| | | |
|---|---|---|
| 1. | Film on the "Oakleaf Project" (IPI) | Admiralty Room |
| 2. | Informal Talks with Resource Consultants | Chart Room |
| 3. | Auto Tutor (programmed learning) | Chart Room |
| 4. | Computer-based Instruction | Chart Rcom |
| 5. | Display of Individualized Instruction Materials | Ship's Lounge |

Noon-1:30 Lunch

**Tues p.m.**

Reports of Group Discussion Leaders

| | | | |
|---|---|---|---|
| 1:30-2:15 | Groups 1-7 | Admiralty Room | Dr. Donald Nasca |
| | Groups 8-11 | Chart Room | Mr. John Walsh |
| | Groups 12-15 | Ship's Lounge | Dr. Ted Grenda |

2:30-3:15 Panel Discussion: "How my district is developing Individualized Instruction"- Admiralty Room

Dr. Ted Grenda, Chairman
Mr. Irving Carlin-Three Village
Mr. Alvin Kravitz-Amityville
Mr. Barry Kane-Smithtown
Mr. Robert Sokel-Wading River

3:15-3:45 Question and Answer Period — Discussion Panel

3:45-4:15 Identify Future Action and Programs — Dr. Ted Grenda

4:15-4:30 Questions and Answers- Conference Wrap-up — Mr. John Walsh

# MARCH PROGRAM

## Monday p.m.

| | | |
|---|---|---|
| 1:00-3:00 | Sign-in and Registration | |
| 3:00 | Conference Opens | Admiralty Room |
| to | Introductions<br>Welcoming Remarks | Dr. John Keough<br>Charles Robinson |
| 4:00 | Survey of Individualized Instruction in New York State | Dr. Donald Nasca |
| | Questions and Answers | |

4:00 to 5:00 — Guests may attend any of the following:

| | |
|---|---|
| Film on "The Oak Leaf Project" | Admiralty Room |
| Film on "The Microteaching Approach to Individualized Instruction in Mathematics" | Admiralty Room |
| **Informal talks with Resource Consultants:** | |
| ■ Computer-based Instruction - Dr. Ludwig Braun, Professor of Electrical and Systems Engineering, Brooklyn Polytechnical Institute; Melvin Mendelsohn, Principal, Malverne High School | Ship's Lounge |
| ■ Individualized Instruction of the Handicapped - John D'Antonio, Director, Project TEACH | Ship's Lounge |
| ■ Individualized Instruction in New York State - Dr. Ted Grenda, Chairman, Individualized Instruction Council, State Education Department. | Chart Room |
| ■ Education for the Gifted - Mr. Roger W. Ming, Supervisor of Instruction for the Gifted, New York State Education Department | Chart Room |
| ■ National Survey of Individualized Instruction - Larry Sribnick, Coordinator of Instructional Technology, Nassau County Regional Education Center | Chart Room |
| ■ New York State Survey of Individualized Instruction - Dr. Donald Nasca, Chairman, Department of Educational Research, State University at Brockport | Chart Room |
| ■ Individualized Instruction in the Nongraded School - Dr. William McLoughlin, Professor of Education, St. John's University | Chart Room |
| ■ Programmed Learning According to Need (Project PLAN) - Herbert Cavanagh, Elementary Principal, Hicksville Schools | Chart Room |
| ■ Individualized Instruction - Science Education - Douglas Reynolds, Associate, Bureau of Science Education, New York State Education Department | Chart Room |
| ■ Individualized Approach to Reading Instruction - Alvin Kravitz, Director of Reading, Amityville Schools | Chart Room |
| ■ Survey of Individualized Instruction in Suffolk County - Mrs. June Robinson, Consultant to Suffolk County Regional Education Center on Individualized Instruction | Chart Room |

| | | |
|---|---|---|
| 5:00-6:00 | Dutch Treat Cocktails | |
| 6:00-7:30 | Dinner | |
| 7:30 to 8:30 | "Individualized Instruction in the Non-graded School" - Admiralty Room<br>Questions and Answers | Dr. William McLoughlin |
| 8:30 | Work sessions of mixed groups to develop a plan for exploring, initiating, implementing or expanding a program of individualized learning. | Group Discussion Leaders |

| Group | Location | Leaders |
|---|---|---|
| # 1 | Admiralty Room-Front | James O'Toole |
| # 2 | Admiralty Room-Rear | Dr. Ludwig Braun |
| # 3 | Chart Room | John Ahern |
| # 4 | Ship's Lounge | John D'Antonio |
| # 5 | Forecastle-Suite 41S (upper level) | Wilfred Gray |
| # 6 | Forecastle-Suite 48S (upper level) | Barry Kane |
| # 7 | Foredeck-Suite 61S (middle level) | Alvin Kravitz |
| # 8 | Foredeck-Suite 68S (middle level) | Herbert Cavanagh |
| # 9 | Foredeck-Suite 71S (top level) | Melvin Mendelsohn |
| # 10 | Foredeck-Suite 78S | Roger Ming |
| # 11 | Skippers Cottage | Larry Sribnick |
| # 12 | Quarter Deck Cottage | Douglas Reynolds |

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Tues. a.m.

| | | |
|---|---|---|
| 7:00-8:30 | Breakfast | |
| 8:30 | First Session | Admiralty Room |
| | Specific Practices - Individualized Instruction in New York State | Dr. Donald Nasca |
| | Survey of Individualized Instruction in Suffolk County | June Robinson |
| 9:00-10:00 | Return to Group Discussions | |
| 10:15-10:45 | Coffee Break | Main Dining Room |

Reports of Group Discussion Leaders

| | | | |
|---|---|---|---|
| 10:45 to 11:30 | Groups 1 - 6 | Admiralty Room | Dr. Donald Nasca |
| | Groups 7 - 9 | Chart Room | John Walsh |
| | Groups 10 - 12 | Ship's Lounge | Dr. Ted Grenda |

| | | |
|---|---|---|
| 11:30-12N | Repeat of Monday Afternoon at 4:00 | |
| 12N-1:30 | Lunch | |
| 1:30 to 2:30 | Panel Discussion: "How My District is Developing Individualized Instruction"<br>Dr. Ted Grenda, Chairman<br>Herbert Cavanagh, Hicksville<br>Alvin Kravitz, Amityville<br>Barry Kane, Smithtown<br>Robert Sokel, Wading River | Admiralty Room |
| 2:30-3:00 | Question and Answer Period | Discussion Panel |
| 3:00-3:30 | Identify Future Action and Programs | Dr. Ted Grenda |
| 3:30-4:00 | Questions and Answers-Conference Wrap-up | John Walsh |
| 4:00 | Adjourn | |

## WHO'S WHO ON CONFERENCE LEADERS

| | |
|---|---|
| John Ahern | - Teacher in the Half Hollow Hills District. |
| Dr. Ludwig Braun | - Professor of Electrical and Systems Engineering, Brooklyn Polytechnical Institute, an expert in the use of computers in education. |
| Irving W. Carlin | - Principal of the Nassakeag School in the Three Village District. |
| Herbert Cavanagh | - Principal of Woodland Avenue School, Hicksville, who is implementing Project PLAN (Programmed Learning According to Need), developed by Westinghouse. |
| John D'Antonio | - Director, Project TEACH, a Suffolk County Title III project organized to plan innovative programs for the education of handicapped children. |
| Gerald Devlin | - Principal of the Idle Hour School in Connetquot District. |
| Mary Flynn | - Research Supervisor for Nassau County's Regional Educational Planning Office. |
| Dr. Ted Grenda | - Director of General Education, State Education Department, and Chairman of New York State's Individualized Instruction Council. |
| Wilfred Grey | - Principal of the Northwest School in Amityville District. |
| Barry Kane | - Principal of Meadow Glen School in Smithtown District and Chairman of the Superintendent's Advisory Planning Council. |
| Vincent King | - Assistant District Superintendent in Suffolk's First Supervisory District. |
| Alvin Kravitz | - Director of Reading, Amityville Schools, who has implemented a variety of Individualized Instruction techniques in reading. |
| Dr. William McLoughlin | - Professor of Education, St. John's University, an expert on Individualized Instruction in the Non-graded School. |

| | | |
|---|---|---|
| Melvin Mendelsohn | - | Principal, Malvern High School, and former Director of Computer Assisted Instruction, Board of Education, City of New York. |
| Roger Ming | - | New York State Education Department's Supervisor of Instruction for the Gifted, Executive Secretary of the Task Force on the Impact of Technology on Education, and a member of New York State's Individualized Instruction Council. |
| James O'Toole | - | Director of Inservice Education for the Middle Island School District. |
| Douglas Reynolds | - | Associate of the Bureau of Science Education, New York State Education Department, an expert in Individualized Instruction in Science Education. |
| Charles Robinson | - | Principal of Grace L. Hubbs Elementary School in Commack. |
| June Robinson | - | Elementary School Teacher and Consultant to the Suffolk County Regional Educational Planning Office on Individualized Instruction in Suffolk County Schools. |
| Larry Sribnick | - | Coordinator of Instructional Technology, Nassau County Regional Educational Planning Office, an expert on the Edling Project, a National study of Individualized Instruction programs sponsored by the U.S. Office of Education. |
| Robert Sokel | - | District Principal of the Wading River School District. |
| James Womack | - | Assistant District Superintendent of Schools for Suffolk's Third Supervisory District. |

# OUTCOMES OF GROUP DISCUSSIONS

Participants at the February Conference assembled into 15 groups; those at the March Conference into 12.

The outcomes that follow were submitted by the group recorders and arranged in these categories:

Philosophy
Public Relations
Goals and Objectives
Organization
Teacher and Teacher Preparation
Diagnostics
Evaluation
Materials
Other Suggestions

## FEBRUARY CONFERENCE

### PHILOSOPHY

1. A philosophy of individualized instruction must be defined and developed for and by the unit using such instruction. (Groups 3, 6, 10, 13)

2. The program of individualized instruction should come from within the school. (Group 5)

3. The administrative and professional staffs must be totally committed to the philosophy of individualized instruction. (Groups 5, 12, 14) In contrast to this, Group 15 felt that although it is preferable to have cooperation between administrators, teachers and parents, the individualized instruction program can operate successfully with either one or a group of teachers in a building.

4. An individualized program should promote the interaction of children with each other. (Group 2, 15)

5. The total program should include both individual and group learning experiences. (Group 2)

6. A developmental program will lead to a change in school and society. (Group 12)

7. The philosophies of state and federal agencies should be investigated. (Group 2)

8. The efficacy and desirability of individualized learning needs to be demonstrated and proven. (Group 1)

### PUBLIC RELATIONS

1. For an individualized program to be successful, it is necessary to have established positive attitudes towards the program and in the educators, the boards of education and the community. (Groups 1, 11, 13, 14)

2. Involve administrators, parents and the board of education in the development of the program. (Group 3)

3. There should be an "Orientation Program" set up for interested parties. (Group 9) Group 10 suggests "teas" to explain the program specifically.

4. Interested parties should be given progress reports on the individualized program. (Groups 9, 13). Group 10 suggests doing this at individual parent conferences and curriculum nights which involve the children.

## GOALS AND OBJECTIVES

1. Carefully prepared goals of individualized instruction should be discussed and developed. (Groups 2, 6, 8, 9, 10, 11)

2. The areas of freedom for teachers and pupils need to be defined. (Group 6)

3. Both pupil and teacher ideas should be considered in the development of goals and objectives. (Group 6)

4. Behavioral objectives must be considered. (Group 12)

5. Decide on goals and objectives beginning with the "pilot" areas. (Group 15)

## ORGANIZATION

1. There should be a careful sequential and coordinate organization of routines and time in an individualized program. (Groups 3, 6, 9, 11, 12, 15)

2. An individualized program should be initiated in one subject area. (Groups 3, 4, 11, 15). However, Group 5 states a one program commitment is not recommended.

3. Teachers should organize their files and record-keeping systems very carefully. (Group 15)

4. Develop a plan where the students actively assist in the individualized program. (Groups 2, 9, 15)

5. Consider how the building can be best set up for individualized instruction. (Groups 3, 10, 11)

6. A rich environment providing many choices needs to be developed. (Group 4)

7. A non-graded approach should be used. (Group 3)

8. Changes to be made within the classroom include:
   a. Ending competion between students.
   b. Eliminate marks.
   c. Develop trust between teachers and students.
   d. Encourage self-responsibility among students. (Group 15)

9. Set a specific amount of time to test out the ideas introduced in the limited individualized program started.
   a. The time period should not exceed 3-4 weeks, and the teachers should keep accurate records and data as their findings.
   b. After 3-4 weeks, a new planning program, setting new objectives and evaluating "old" findings, should be started. (Group 15)

10. Parent volunteer programs should be organized. (Group 14)

## TEACHERS AND TEACHER PREPARATION

1. The faculty should be helped to develop attitudes towards the individualization of instruction. (Groups 4, 10). Group 7 adds, if teachers are shown the effectiveness of individualized education by teachers who are using programs such as individualized reading, they will be more receptive.

2. Teachers should observe individualized instruction programs. (Groups 3, 4, 14, 15). Group 8 suggests visiting PLAN Program, Woodland School, Hicksville; IPI Math Program, Chestnut Hill School, Half Hollow Hills. An individualized program needs perceptive teachers. (Group 4). Teachers should recognize the fact that an individualized program takes more teacher preparation time. (Group 4)

3. Teachers should examine different individualized learning models. (Group 9)

4. In-service programs in individualized instruction should be instituted. (Groups 11, 13)

5. Teachers should share teaching skills, ideas and materials necessary to implement an individualized program. (Group 3). Group 10 suggests faculty brainstorm sessions be held and that teachers have a common plan time.

6. Individual preferences, skills and teaching techniques should be recognized. (Group 15)

7. Teachers should begin by working with either a small group or a specific discipline to introduce the students to the program and to give the teacher experience with the program. (Group 15)

8. An individualized program should commence with teachers who are ready. (Group 11)

9. The faculty should be evaluated for compatability. (Group 10)

10. There should be open staff relations where there exists: free communication; a non-threatening atmosphere; toleration of mistakes; development of alternatives; and the building of an instructional team. (Group 11)

## DIAGNOSTICS

1. In an individualized program there needs to be a careful diagnosis of the children's needs. (Groups 1, 3, 8). Group 3 suggests using I.R.I., previous teacher suggestions, SRT and Boxed.

2. Teachers should consider the various diagnostic tools and select those which fit their program. (Group 10)

3. The rate of each child's learning needs to be established. (Group 4)

4. The style in which each child learns most effectively is difficult to detect. (Group 4)

5. Each child's interests need to be determined. (Group 4)

## EVALUATION

1. a. The evaluative aspects of the program should be kept concurrent with the developmental aspects. (Group 8)

   b. Evaluation should be periodic and constant. (Group 9)

2. A system should be developed for gathering data from your program and keeping effective records. (Groups 8, 13)

   a. A student log or folder should be kept. (Group 10).

   b. Teachers should set up skill list (or check sheets) to help keep track of what each student accomplishes. A variety of sources could be used to set up these lists including objectives printed out in reading series, math series, the U.C.L.A. Bank of Objectives and from writers like Bruner or Whitehead.

3. A system for reporting student progress should be established. (Groups 9, 11). Group 5 recommended conference-type reporting.

4. The relationship between test results (Iowa, etc.) and educational innovation should be established for real evaluation. (Group 2)

## MATERIALS

1. A variety of materials to assist in an individualized program should be evaluated and appropriate tools selected. (Group 3, 5)

2. Package plans can be of some help and offer initial support in planning and developing self-confidence with individualization. (Group 4)

3. Package plans only accommodate "rate" of learning. You need a combination of packages and/or teacher talent and resources to accommodate the different styles in which children learn best and the individual interests of children. (Group 4)

4. Teachers should develop their own materials. (Group 3). On the other hand, Group 8 felt money should be invested in a tested system - e.g., I.P.I. Plan - and time shouldn't be wasted in developing homemade materials.

5. Put materials in accessible places. (Group 10)

6. Make use of cassettes, hardware and furniture. (Group 10)

7. An area should be provided where teachers may observe and experiment with a variety of materials. (Group 14)

## OTHER SUGGESTIONS

1. There should be an innovation newsletter to disseminate good teaching ideas. (Regional Center or State Education Department?) (Group 2)

2. The Regional Center should take a much more active role in in-service techniques (courses, T.V., audio cassettes, etc.), arrange for sharing of experiences and the compilation of available materials. (Group 2)

3. Strategies should be developed for implementing a continuous individualized education program from K - college. (Group 10)

## MARCH CONFERENCE

### PHILOSOPHY

1. Philosophical agreement. (Group 1)

2. Redefine the role of the teacher. (Group 2)

3. Decide as a community to either accept or reject the principles and practices of Individualized Instruction. (Group 4)

4. Statement of agreement be drawn up
   a. Students learn at different rates
   b. Students have different skills, interests, goals, problems, attitudes, ways. (Group 12)

5. District commitment to sharing. (Group 12)

### PUBLIC RELATIONS

1. Involve the community. (Group 1)

2. Important to implement a teach and work together attitude
   a. Trust
   b. Togetherness. (Group 3)

3. Set up a program of investigation and information for the school staff and the community. (Group 4)

4. Orientation or selling. (Group 8)

5. Parent involvement. (Group 9)

6. How can regional centers help to change the attitude of the community? (Group 11)

### GOALS AND OBJECTIVES

1. Determine objectives. (Group 1)

2. Depend on student interests more. (Group 2)

3. Establish goals and objectives based upon the needs of the student, the school and the community. (Group 4)

4. Agreement on objectives. (Group 5)

5. Long range goals. (Group 8)

6. Behavioral objectives. (Group 8)

7. Establish behavioral objectives. (Group 9)

ORGANIZATION

1. Time built in for planning. (Group 1)

2. Use of individual schedules. (Group 2)

3. Use of older children to check progress. (Group 2)

4. Posting of class goals - checking off when all complete. (Group 2)

5. Use interdisciplinary problem-solving approach. (Group 2)

6. Specific Practices
   Steps for immediate experiment!
   a. find your strong area
   b. what is next unit you will be doing
   c. see how the text approaches the major concept
   d. break concept down into its component parts - mini-skills
   e. design a pre-test (diagnosis) for each mini-skill. Be sure to give at least 5 items per skill. Consider group reading level, etc. when composing tests.
   f. design a post-test (evaluation) for each skill component
   g. run enough copies for all and put into labeled folders
   h. introduce the new approach
      slowly
      clearly
      note: non competitive - grades out
   i. Procedure:
      pre-test
      answer key
      conference - prescribe or not
                   prescribe post-test
                   recheck conference
                   post activity

   (Group 3)

7. Determine the strengths and resources of the school. (Group 4)

8. Establish climate of: trust, sincerity, involvement. (Group 6)

9. Encourage - discovery, pupil goal setting. (Group 6)

10. Develop organizing centers. (Group 6)

11. Find pupil preferred modalities. (Group 6)

12. Enrich environment with local resources. (Group 6)

13. See that: self image is enhanced; connectedness is established; some controls over an individual's life is acknowledged. (Group 6)

14. Try to: relate topics and materials to learner's knowledge, feelings, concerns. (Group 6)

15. Establish overall strategy. (Group 7)

16. A plan of action. (Group 7)

17. Determine objectives. (Group 7)

18. Use a cooperative approach for:
    a. teachers
    b. administrators
    c. para-professionals
    d. volunteer help
    e. student volunteers (Group 7)

19. Change should come from:
    a. teachers
    b. administrators (Group 7)

20. Work through individual interests of children. (Group 7)

21. Create a humanistic environment. (Group 8)

22. Physical facilities help. (Group 8)

23. Initiation of high interest individualized programs for slow learners. (Group 11)

24. Having older children work with younger children. (Group 11)

25. Have children work to develop sense of responsibility. (Group 11)

26. Overcome problems of:
    a. shortage of hardware
    b. shortage of software
    c. preparation time
    d. para-professional assistance. (Group 12)

27. Ideas for reading grouping
    a. individual conferences for determining group membership
    b. work with one group at a time
    c. records on achievement to next teacher
    d. parent conferences
    e. develop skill sequences based on behavioral objectives (Group 12)

28. Ideas for Math:
    a. try math packets
    b. determine skills - work individually to develop these skills (Group 12)

29. Ideas for Science:
    a. set up corners - for individualized procedure in doing units
    b. use kits with specified procedures (prepared). (Group 12)

## TEACHER AND TEACHER PREPARATION

1. See more programs in action. (Group 2)

2. Have much more communication among teachers. (Group 2)

3. Discuss and establish what a full commitment involves. Realistically, describe how the "new" procedure would operate what would be the professional's roll and expectations. (Group 4)

4. Strong orientation. (Group 5)

5. Administration and faculty agreement on programs. (Group 5)

6. Teachers should understand an individualized instruction program requires:
    a. more work for teacher
    b. takes more time
    c. there is grouping and individualization, an ebb and flow process (Group 7)

7. Suggestions for retraining of personnel
    a. through regional institutes
    b. BOCES centers
    c. TV instruction
        1) local district
        2) county
        3) school
    d. University personnel to be retrained
    e. Demonstrations
        1) classes
        2) schools
        3) districts
    f. Begin with one step at a time
        1) recreational reading
        2) math skills
        3) reading skills (Group 7)

8. Maximum staff utilization. (Group 8)

9. Outside consultants. (Group 8)

10. How to:
    a. Buy a program
    b. Develop one (Group 8)

11. Involvement of whole staff. (Group 9)

12. Faculty meeting with presentation. (Group 10)

13. In-service presentations (open to all). (Group 10)

14. Committee to establish goals. (Group 10)

15. Look into resources available. (Group 10)

16. Visitations to other schools. (Group 10)

17. Planning a pilot program. (Group 10)

18. Implementation. (Group 10)

19. Evaluation. (Group 10)

20. Workshop to follow through on results. (Group 10)

21. Bring in guest speakers to set up programs. (Group 11)

22. Visitations to schools involved in individual programs. (Group 11)

23. Teachers should seek assistance from:
    a. State Education Department
    b. Regional Centers
    c. Teachers associations
    d. School districts
    e. University - higher education (Group 12)

24. Free time to visit individualized programs in other districts. (Group 12)

25. Inservice preservice training programs in individualized programs. (Group 12)

## DIAGNOSTICS

1. Definition - know individual needs, interests, modes of operation - so that instruction might be best planned with and for him. (Group 3)

2. Provide individual diagnosis to provide for prescriptive teaching. (Group 7)

## EVALUATION

1. Method of measuring progress. (Group 1)
2. Eliminate grading. (Group 2)
3. Avoid restrictive tests that grade only. (Group 7)
4. Establish plans for record keeping. (Group 7)
5. Develop skill sequences and checkoff sheets. (Group 12)

## MATERIALS

1. Try more commercial self-instructional games. (Group 2)
2. Provide materials of a varied nature. (Group 7)
3. Find materials available. (Group 8)

## OTHER SUGGESTIONS

1. Use facilities of regional centers
   a. for implementing programs
   b. for redesign of programs (Group 11)
2. How can the professional librarian be used to the greatest advantage? (Group 11)
3. Use of educational communications personnel. (Group 11)
4. Teach children about education. (Group 11)
5. Act as a clearinghouse to programs. (Group 12)
6. Set up a model school system that would provide for dissemination. (Group 12)
7. A "consumer's guide" to individualized programs - utilizing classroom testing procedures. (Group 12)
8. Ideas for administrations:
   a. maintain positive posture as to teacher competence
   b. become knowledgeable about individualized instruction
   c. pressure SED University to get involved (Group 12)

PARTICIPANTS" REACTION SHEETS SUMMARIZED

Dear Participant:

Your evaluation of the conferences would be greatly appreciated. Please take a few moments to complete the following and turn it in when the conference adjourns.

Thank you

| | Very Good | Good | Adequate | Poor |
|---|---|---|---|---|
| Conference Concept (presentations, group discussion, panel discussion) | | | | |
| 1. Educational value | 42 | 53 | 14 | 4 |
| Physical Accommodations | | | | |
| 2. Quarters | 75 | 13 | 5 | - |
| 3. Meeting rooms | 62 | 27 | 12 | 2 |
| 4. Service facilities | 80 | 22 | 6 | - |
| Program Format | | | | |
| 5. Program content | 31 | 62 | 16 | 1 |
| 6. Quality of presentations | 23 | 58 | 29 | 9 |
| 7. Quality of group discussions | 44 | 44 | 22 | 2 |
| 8. Quality of panel discussions | 33 | 63 | 8 | |
| 9. Provisions for your involvement | 35 | 53 | 16 | 8 |
| 10. Overall evaluation of conference | 34 | 62 | 13 | |

## PARTICIPANTS - FEBRUARY CONFERENCE

Amityville Public Schools
- Alvin Kravitz
- Wilfred Gray
- Regina Moylan

Bay Shore Schools
- Marion Prahl
- Madeline McGlynn
- Walter Hajek
- Hildyne Bowens

Bellport Schools
- Robert Gardner
- Edward McHugh
- Frank Long
- Donald Madelung
- Daniel Koch
- Gilbert Halpin
- Beverly Weinstock
- Edith Hughes

Brentwood Schools
- Austin Harney
- Peter DiMento
- Elsie Reavis

Commack Schools
- Jules Harris
- Douglas Morey
- Gordon Hausrath
- Mrs. Helbing
- Charles Comstock
- Raymond Heins
- Robert Allen
- Lee Hargrave

Connetquot Schools
- Gerald Devlin
- Sue Ericksen
- Al Zivitz
- Robert Liljequist
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- Nancy Zmyndak
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- Catherine Quinn
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East Islip
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- Philip Carolan

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SCRC

SUFFOLK COUNTY

# REGIONAL CENTER

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